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EXAMINER

HOBBS, MICHAEL L

ART UNIT	PAPER NUMBER
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1797

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/529,855	Applicant(s) CAMPBELL, ANGUS	
	Examiner MICHAEL HOBBS	Art Unit 1797	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 May 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☒ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 66-152 is/are pending in the application.
- 4a) Of the above claim(s) 106-152 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 66-105 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 25 March 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>03/25/2005</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

1. Applicant's election with traverse of invention I consisting of claims 66-105 in the reply filed on 05/08/2008 is acknowledged. The traversal is on the ground(s) that several claim limitations are "essentially *verbatim*". This is not found persuasive because the special technical feature of the grinding means that is common through each of the inventions was shown to be part of the prior art. As stated in the restriction requirement, the size reduction means does not constitute a contribution over the prior art and no single general inventive concept exists. Claims 106-152 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention there being no allowable generic or linking claim.

The requirement is still deemed proper and is therefore made FINAL.

Priority

2. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Specification

3. The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required: on line 2 of claim 90, the limitation of "one or more

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distribution bars" does not appear in the specification. The examiner suggests amending the specification to include these limitations.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

5. Claim 91 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. On line 2 of claim 91, applicant claims that the motor used to rotate the shaft "comprises a single hydraulic motor". This type of motor does not appear in the original specification nor does it appear in the priority documents (PCT or Foreign priority document). The only reference to a different type of motor is to a "different type" in the PCT filing of the instant application.

6. Appropriate corrective action is required.

Claim Rejections - 35 USC § 102

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

8. Claims 66, 68, 72, 81, 85, 89, 93-96, 102, 104 and 105 are rejected under 35 U.S.C. 102(b) as being anticipated by Tsuchida (US 5,534,042).

9. For claim 66, Tsuchida teaches an apparatus for forming compost that includes a tank or enclosed vessel (1) with a rotatory vane (3) that has a shaft and is used to "grind" the compost material within the tank (col. 3 lines 8-13). The rotary vane is driven by a motor (5) with a lid (2) that is used to load the compost into the container and is fully capable of allowing the compost in the second zone be removed from the tank (col. 3 lines 25-29). Air or oxygen is sent into the tank by a ventilation control valve (20, col. 3 lines 13-17).

10. For claim 68, Tsuchida discloses that the walls are insulated (8) and for claim 72 that rotary vane (3) or grinding means includes more than one blade. For claim 81, the loading port or lid (2) is located at the top of the tank and for claim 85 the shaft for the rotatable vane (3) is located in the center of the tank (Fig. 1). With regards to claim 89, the cutting blades of Tsuchida are fully capable of promoting even and consistent flow of materials through the composter. With regards to claim 93, the rotary vane clips the garbage (21) or compost from the inner side wall of the tank and moves the garbage toward the central axis of the tank (col. 6 lines 31-34) and for claim 94, while Tsuchida

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is silent regarding the direction of rotation of the blades, the blades are fully capable of rotating in either a clockwise or counter-clockwise position. For claims 95 and 96, the lid (2) can be sealed in an airtight manner (col. 6 lines 12-14) and for claim 102 the oxygen or air enters through ventilation control valve (20). For claim 104, the tank includes an exhaust ejector (14) for ventilating gas from the interior of the tank.

Furthermore, the gas from the exhaust ejector (14) is sent to a deodorization tank (12) for eliminating offensive odors (col. 6 lines 65-67, col. 7 lines 13-18).

11. Therefore, Tsuchida meets the limitations of claims 66, 68, 72, 81, 85, 89, 93-96, 102, 104 and 105.

Claim Rejections - 35 USC § 103

12. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

13. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

14. Claim 67 is rejected under 35 U.S.C. 103(a) as being unpatentable over Tsuchida (US 5,534,042) in view of Suzuki et al. (US 2002/0096459 A1).

15. Tsuchida is silent regarding the container being stainless steel or another corrosion resistant material.

16. Suzuki teaches a garbage treatment vessel where the garbage is stored within the vessel and agitated by a propeller unit. For claim 67, Suzuki teaches that the container is made of stainless steel ([0016]). The corrosion resistant properties of stainless steel are known within the art hence the use of stainless steel in food grade containers and for chemical storage. Further, it would be obvious to one of ordinary skill in the art to employ a stainless steel container as suggested by Suzuki in order to prevent corrosion within the container of Tsuchida.

17. Claims 69-71 and 97 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tsuchida (US 5,534,042) in view of Chen et al. (US 2002/0090718 A1).

18. Tsuchida teaches a composter that can hold up to 2300 kg of garbage, but does not specify the volume of the container.

19. Chen teaches a composting and homogenizing organic material. For claims 69-71, Chen teaches a small to medium composter with a volume of 200 - 4000 liters which is the equivalent of 0.2 - 4 m³ ([0019]). This range anticipates the volumes for the composter being less than 8 m³, having a range of 1.5 m³ to 5.0 m³ and a range of 2.0 m³ to 3.0 m³. The sizing of the composter depends on the amount of raw material to be composted and expected throughputs of material. It would be obvious to one of

ordinary skill in the art to employ the volumes suggested by Chen in order to have a composter with enough volume for the garbage of Tsuchida. The suggestion for doing so at the time would have been to modify the volume of the composter based on consumer demand ([0049]).

20. For claim 97, Chen discloses a stage of the reaction using a mesophilic strain of microorganisms ([0003]) and a stage using a thermophilic strain of microorganisms ([0004]). The conditions within the composter are controlled to facilitate waste stabilization at a particular moisture and aeration ([0002]). While not specifying that an oxygen source is controlled, Chen implies that a controlled amount of oxygen is sent to the microorganisms in order to create stable conditions for each strain. Therefore, it would be obvious to one of ordinary skill in the art to employ the mesophilic and thermophilic stages as suggested by Chen in order to decompose the garbage of Tsuchida. The suggestion for doing so at the time would have been in order to consume readily degradable substances within the garbage ([0004]).

21. Claims 73-79, 83, 90, 92, 99, 100 and 101 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tsuchida (US 5,534,042) in view of Goldfarb (US 5,258,306).

22. Tsuchida is silent regarding a wall mounted bar or blade.

23. Goldfarb teaches a two compartment silo composting apparatus that is top loaded. For claim 73-75, Goldfarb teaches more than one rotatable bars (4) that rotates next to more than two stationary bars (6) within the silo. Furthermore, the bars include

splines (54) or teeth that are used to mix and break-up the compost (col. 8 lines 30-35). The use of many bars to break-up and "grind" garbage within the composter allows for proper mixing and aeration of the compost. Further, it would be obvious to one of ordinary skill in the art to employ the stationary and mixing bars as suggested by Goldfarb in order to properly mix and agitate the compost of Tsuchida.

24. For claims 76 and 77, Tsuchida and Goldfarb are silent regarding the spacing between the two bars. However, it is within the skills of one of ordinary skill in the art to modify the distance between the bars in order to optimize mixing and aeration of the compost. It would be obvious to one of ordinary skill in the art to adjust the bar spacing in order to optimize the mixing and grinding of the compost of the result effective variable in this known process, consult *In re Boesh and Slaney* (205 USPW 215 (CCPA 1980)).

25. With regards to claim 78, the bars of Goldfarb are fully capable of being similar widths within the composter. Also for claim 79, Goldfarb is silent regarding the specific widths of the bars. However, it is within the skills of one of ordinary skill in the art to optimize the width of the bars to promote finer granulation of the garbage within the bioreactor. Therefore, it would be obvious to modify the blades of Tsuchida and Goldfarb in order to decrease the amount of time needed to grind the garbage of the compost of the result effective variable in this known process, consult *In re Boesh and Slaney* (205 USPW 215 (CCPA 1980)).

26. For claim 83, Tsuchida is silent regarding a discharge at the bottom of the container. Goldfarb teaches for claim 83 an exit well (27) at the bottom of the

composter for removing material from the interior of the device. The use of a bottom discharge allows a bin or other container to be placed at the bottom of the composter for collecting and transporting the compost. Therefore, it would be obvious to one of ordinary skill in the art to employ the exit well as suggested by Goldfarb in order to remove compost from the interior of the composter of Tsuchida.

27. With regard to claim 90, Goldfarb teaches an agitator arm assembly (4) near the top of the container that is fully capable of assisting in the loading of materials into the composter. The use of a topmost agitator would be obvious to one of ordinary skill in the art to employ as suggested by Goldfarb in order to mix and initially grind the garbage of Tsuchida.

28. For claim 92, Goldfarb discloses an exit well (27) with a sweep paddle that "guides" the compost to the exit well. The use of a sweep paddle or guide would be obvious to one of ordinary skill in the art to employ the sweep paddle as suggested by Goldfarb in order to move the already composted garbage of Tsuchida out of the composter. The suggestion for doing so at the time would have been in order to remove a measured quantity of compost (col. 6 lines 63-65).

29. Tsuchida is silent regarding supplying compressed air to the composter.

30. For claim 99, Goldfarb teaches air is supplied to the system by compressed air or outside fan blowers (col. 4 lines 56-59). It would be within the skills of one of ordinary skill in the art to employ an air compressor as the air supply instead of fans. For claim 100, the sensors of Goldfarb monitor the temperature, moisture and air flow through the composter by being connected to a computer (col. 5 lines 24-26). Furthermore, the

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computer is fully capable of controlling the air flow to induce biological activity or remove excess heat from the composter. Therefore, it would be obvious to one of ordinary skill in the art to employ a source of forced air as suggested by Goldfarb in order to supply air to the composter of Tsuchida. The suggestion for doing so at the time would have been in order to regulate and control the fermentation process.

31. With regards to claim 101, both Tsuchida and Goldfarb are silent regarding the exact placement (range) of the temperature sensor above the lower end of the composter. However, monitoring the temperature of the compost within the device is known within the art and using multiple sensors throughout the composter to monitor the temperature gradient within the composter is also known within the art (refer to Ueda below). Therefore, it would be obvious to one of ordinary skill in the art to place the temperature sensor close to the bottom of the composter of Tsuchida and Goldfarb in order to monitor and control the temperature of the compost. Refer to § MPEP 2144.04 VI C.

32. Claims 80, 82 and 84 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tsuchida (US 5,534,042) in view of Ueda (US 6,702,210 B1).

33. Tsuchida is silent regarding a discharge on the bottom wall of the composter.

34. Ueda teaches a garbage disposing unit that includes internal blades for the mixing and grinding of garbage. With regards to claim 80, Ueda teaches that a raw garbage entrance (10e) that has a cover (10d) which is adjacent to the sidewall of the composter (10a). For claim 82, a discharge port (19) is located at the bottom side wall

(10b) for the removal of compost. The use of a top lid and a bottom discharge allows for the continuous addition and removal of garbage from the composter. Therefore, it would be obvious to one of ordinary skill in the art to employ the loading lid and discharge port as suggested by Ueda in order to simultaneously load and remove compost from the device of Tsuchida.

35. For claim 84, Tsuchida teaches a rotating shaft (12) that passes vertically through the tank (col. 3 lines 59-61). The use of a vertical shaft that runs the length of the composter would allow a skilled artisan to place multiple blades or rods at spaced intervals within the device. Therefore, it would be obvious to one of ordinary skill in the art to employ the vertical shaft as suggested by Ueda in order to place multiple sets of blades within the composter of Tsuchida. The suggestion for doing so at the time would have been in order to support the shaft with the attached blades (col. 1 lines 61-62).

36. Tsuchida is silent regarding temperature sensors.

37. With regards to claim 98, Ueda teaches multiple temperature sensors (16) within the interior of the composter. The use of multiple temperature sensors placed throughout the composter would allow the skilled artisan to monitor the temperature at different levels within the composter and make adjustments as needed in order to maintain the temperature at a specific set-point. Therefore, it would be obvious to one of ordinary skill in the art to employ the sensors as suggested by Ueda in order to monitor the temperature within the composter of Tsuchida. The suggestion for doing so at the time of the invention would have been in order to control the rate of fermentation within the tank.

38. Claims 86-88 and 91 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tsuchida (US 5,534,042) in view of Vanderwal (US 6,139,793).

39. Tsuchida is silent regarding the shaft speed within the composter.

40. Vanderwal teaches a waste treatment control system that includes a pressure vessel with a rotating shaft. For claims 86 and 87, Vanderwal teaches that the rpm speed of the shaft (20) is from about 5 to 50 rpm which reads on the shaft speed being less than 60 rpm and within the range of 10 to 30 rpm (col. 4 lines 59-61). Therefore, it would be obvious to one of ordinary skill in the art to employ the shaft speed of Vanderwal in order to properly mix and grind the garbage of Tsuchida. The suggestion for doing so at the time would have been to allow portions of the waste to contact the walls of the vessel in order to heat the garbage in a substantially uniform manner (col. 4 lines 61-63).

41. With regards to claims 88 and 91, Tsuchida teaches a motor, but is silent regarding whether that motor is electric or hydraulic.

42. For claim 88, Vanderwal teaches that the motor is an electric motor (122). However, Vanderwal is silent regarding the motor being hydraulic. The use of a hydraulic motor as an option for rotating the shaft is within the skills of one of ordinary skill in the art to use instead of an electric motor. Further, it would be obvious to one of ordinary skill in the art to use the electric motor as suggested by Vanderwal or a hydraulic motor in order to rotate the central shaft of Tsuchida.

43. Claim 103 is rejected under 35 U.S.C. 103(a) as being unpatentable over Tsuchida et al. (US 5,534,042) in view of Greeb (US 5,234,596).

44. For claim 103, Tsuchida teaches a pulsator (4) at the bottom of the tank around the shaft of the rotary vane that assists in mixing the garbage within the composter. Tsuchida is silent regarding injecting air from the bottom of the container.

45. Greeb teaches a device for composting organic material where that material is fed into the top of the composter and discharged from a bottom port. For claim 103, Greeb teaches an air-distributing device at the bottom of the device for aeration of the compost. The air flow counter-currently through the debris mixing and aerating the compost (col. 3 lines 23-26). It would be obvious to one of ordinary skill in the art to employ the air-distributing device as suggested by Greeb in order to aerate and mix the compost of Tsuchida. The suggestion for doing so at the time would have been in order to supply air for the composting of the raw garbage within the device.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MICHAEL HOBBS whose telephone number is (571)270-3724. The examiner can normally be reached on Monday-Thursday 7:30 AM - 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jill Warden can be reached on (571) 272-1267. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/William H. Beisner/
Primary Examiner, Art Unit 1797

MLH

